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P 401

TITLE: MITOMYCIN C AND 5-FLUOROURACYL TOXICITY IN HUMAN RPE CELLS CULTURE.
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PURPOSE: We studied the effects of exposure to mitomycin C and 5-Fluorcuracil to human RPE cultures, in growth inhibition and citoxicity.
METHODS: 1) Growth inhibition: RPE cultures (3.000 cells/well) were exposed to different concentrations of mitomycin C and 5-Fluorouracil, and cell viability (MTT test) was evaluated 48h, 72h and 96h after. **2) Citotoxicity:** RPE cultures (10.000 cells/well) were exposed to different concentrations of mitomycin C and 5-Fluorouracil, and cell viability (MTT test) was evaluated 96h after.
RESULTS: 1) Growth inhibition: IC_{50} (µg/ml) or dose that produced 50% RPE growth inhibition was at 48 h 0.86; and at 96 h 0.43 for the mitomycin, whereas it was at 48 h 6.38; and at 96h 1.36 for 5-fluorouracil. **2) Citotoxicity:** IC_{50} (µg/ml) or dose that produced 50% RPE citotoxicity was at 96 h 0.09 for the mitomycin, whereas it was at 96h 0.55 for 5-fluorouracil.
CONCLUSIONS: Mitomycin C at lower doses has a higher effect on RPE growth inhibition and citotoxicity than 5-fluorouracil.

P 402

NEW ADVANCE IN THE TREATMENT OF THE RETINOPATHY OF PREMATURITY: LASER DIODE PHOTOCOAGULATION.
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Purpose: We have used the diode laser photocoagulation in the treatment of the retinopathy of prematurity (ROP).
Methods: We have treated 22 eyes of 12 patients with ROP.3 infants have been followed up for at least 3 months and 9 infants have been followed up for at least one year. The indication of treatment has been: zone I with "plus" disease, any stage; zone II with "plus" disease, stage 2 or zone II stage 3. Treatment was administered within 72 hours after the diagnosis and topical anesthesia and sedation was used in all cases
Results: We have treated 14 eyes with threshold disease and 8 eyes with prethreshold disease. No evidence of lesions of the anterior segment or vitreous hemorrhage were found after the treatment. External inflammatory sings were almost nonexistent. Systemic complications occurred only in 3 sessions of treatment. 8/14 eyes (57%) with threshold disease and 8/8 eyes (100%) with prethreshold disease have a favorable outcome. In total, 16/22 eyes (73%) with ROP have favorable outcome.
Conclusion: Treatment with diode laser is easily performed, effective, essentially in cases of prethreshold disease but too in cases of threshold disease, and with slight ocular or systemic complications

P 403

TITLE: TRANS-SCLERAL VS TRANSPUPILLARY DIODE PHOTOCOAGULATION: EXPERIMENTAL HISTOPATHOLOGIC STUDY.
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Purpose: Diode trans-scleral photocoagulation may be an alternative to cryotherapy for the treatment of proliferative diabetic retinopathy in cases of opacity of media. In this paper we try compare the wound caused by the diode laser applied via transscleral vs transpupillary.
Methods: We have studied 10 eyes of 10 pigmented rabbits weighted 3 Kg. Under general anesthesia, in 6 rabbits we performed a trans-scleral photocoagulation (5 impacts, 500 miliwatts, 1-2-5 sec duration). In 4 rabbits we performed transpupillary photocoagulation (15 impacts, 150 miliwatts, 0.1-0.2 sec.).We evaluated the histopathologic effects, surgical complications and ophthalmoscopic results.
Results: The trans-scleral photocoagulation technique is similar to that used in cryoterapy. The ophthalmoscopic image depends of the time of exposure, to longer duration more whitenning of the retina. We didn't observe hemorrhages nor another side-effects caused by the technique. The histopathologic study showed that wounds in both groups were similar (alterations in photo-receptors layer and pigment epithelium, outer plexiform and ganglion cells).
Conclusions: Trans-scleral photocoagulation is a simple technique to use and do not present complications or side effects. The histopathologic wound is similar to that obtained with transpupillary photocoagulation. The technique is safe and could be applied in cases of opaque media in proliferative retinopathy. More experiencies are needed.

P 404

TITLE: DYE LASER PHOTOCOAGULATION OF RECURRENT CHOROIDAL NEOVASCULARIZATION.
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BACKGROUND: The high rate of recurrence of CNV after argon or Krypton laser treatment and their characteristic features suggest some theoretical benefits from the treatment with a tunable dye laser. Therefore we compared 2 groups of patients treated with krypton and dye laser to determine if the hypothesized advantages would turn into practice.
METHODS: We treated 15 eyes with recurrent CNV with sequential dye red/yellow photocoagulation and 15 patients only with krypton-red photocoagulation. The sequential treatment was performed as follows: the red wavelenght was first lightly applied near the edges of the CNV enhancing the visualization of the extent of the CNV. Next the yellow wavelenght is applied at power setting sufficient to create an intense white lesion.
RESULTS: We achieved the obliteration of CNV with red/yellow photocoagulation in less settings compared with those treated by krypton-red laser. Also the functional results were good.
CONCLUSIONS: The sequential red/yellow dye laser photocoagulation of recurrent CNV offers a better treatment both in extension and in intensity.